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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------|------------------|
| 10/647,613 | 08/25/2003 | Justin M. Crank | 1001.1686101 | 2850 |
| 28075 | 7590 | 06/21/2006 | | EXAMINER |
| CROMPTON, SEAGER & TUFTE, LLC 1221 NICOLLET AVENUE SUITE 800 MINNEAPOLIS, MN 55403-2420 | | | HOEKSTRA, JEFFREY GERBEN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3736 | |

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/647,613 | CRANK, JUSTIN M. | |
| | Examiner Jeffrey G. Hoekstra | Art Unit 3736 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 April 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
 - 4a) Of the above claim(s) 3,4,6,8,12,13,15,17,20,23,24,27,30 and 31 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,2,5,7,9-11,14,16,18,19,21,22,25,26,28,29 and 32 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice of Amendment

1. In response to the amendment filed on 04/10/2006, the amendments to claims 1, 10, 19, 26 and the specification are acknowledged. The current rejections of the claims 1, 2, 5, 7, 9-11, 14, 16, 18, 19, 21, 22, 25, 26, 28, 29 and 32 are *withdrawn*. The following new and reiterated grounds of rejection are set forth:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5, 7, 9-11, 14, 16, 18, 19, 21, 22, 25, 26, 28, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samson et al (US 5,827,201) in view of Dobson (US 5,724,989).

4. For claims 1, 7, 10, 16, 19, and 26, Samson et al discloses the claimed invention, *including*: a medical guidewire 100 comprising a tapered elongate shaft 142 coupled to a helically disposed coil 148,188, except for comprising the composite coil of two different materials wherein the outer material is for example a radiopaque coating and has a larger Young's modulus than that of the inner material (which dictates that the moment of inertia with respect to an axis running through the centroid and parallel to the longitudinal axis of the coil is greater than the moment of inertia with respect to an axis running through the centroid and parallel to the radial axis of the coil). (For clarification:

the examiner notes for example the Young's modulus of a typical radiopaque coating, tungsten carbide, is equal to 450 – 650 GPa whereas the Young's modulus for the inner material, Nitinol, ranges from 28 – 75 GPa depending upon stressed state of the crystalline structure which dictates either an austenite or martensite phase.) Dobson teaches a helically disposed coil 14 disposed on a the elongate tapered shaft 22 of a guidewire, wherein the wire forming the coil is comprised two different materials 30,32 wherein the outer material is for example a radiopaque coating 30 and has a larger Young's modulus than that of the inner material 32 (column 3 line 25 – column 4 line 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the intravascular device as taught by Samson et al, with the composite wire coil of Dobson for the purpose of configuring the material and mechanical properties of an intravascular device to increase the efficacy of the device to navigate tortuous vasculature to increase patient safety during advanced surgical procedures.

5. For claims 2, 9, 11, 18, 21, 22, 28, and 29, Samson et al discloses a wire of polygonal and rectangular cross section (column 9 lines 54-58).
6. For claims 5, 14, 25, and 32, Dobson discloses wire formed of material with a Poisson's ratio ranging from 0.25 – 0.5. (For clarity: the examiner notes for example the Poisson's ratio of Gold is equal to 0.42 and that of AISI 304 Type Stainless Steel is equal to 0.29)

Response to Arguments

7. Applicant's arguments with respect to claims 1, 2, 5, 7, 9-11, 14, 16, 18, 19, 21, 22, 25, 26, 28, 29 and 32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Heilman et al (US 4,003,369), Evans III (US 4,724,846), Gambale et al (US 5,144,959), Palermo et al (US 5,769,796), Nguyen et al (US 5,772,609), and Lorenzo (US 6,056,702) each disclose composite intravascular devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey G. Hoekstra whose telephone number is (571)272-7232. The examiner can normally be reached on Monday through Friday, 8:00 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max F. Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGH

JH


MAX F. HINDENBURG
COMBINATION PATENT EXAMINER
ART UNIT 3700